

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application. Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Listing of Claims:

Claims 1–42 (Canceled)

43. (Previously Presented) A method comprising:
creating a hole-punching message addressed to a remote device and configured to enable a network address translator to create an address mapping;
sending the hole-punching message such that the hole-punching message is processed by the network address translator, such that the address mapping is created; and

wherein any further disposition of the hole-punching message after the address mapping is created is immaterial.

44. (Previously Presented) The method of claim 43 wherein the hole-punching message is formatted so as to be harmless.

45. (Previously Presented) The method of claim 43 further wherein the network address translator is a plurality of network address translators coupled in series.

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46. (Previously Presented) The method of claim 43 wherein the creating and the sending of the hole-punching message is initiated by a network communications stack.

47. (Previously Presented) The method of claim 43 wherein the creating and the sending of the hole-punching message is initiated by a program.

48. (Previously Presented) The method of claim 43 wherein the remote device is behind an additional network address translator.

49. (Previously Presented) The method of claim 43 wherein the method is embodied in computer-executable instructions stored on computer-readable media.

50. (Previously Presented) A method performed by a program operating on a local device, the method comprising:

creating a hole-punching message addressed to a remote device;
configuring the hole-punching message to enable a network address translator to create a unique address mapping;
sending the hole-punching message; and
wherein the hole-punching message is received and processed by the network address translator such that the unique address mapping is created, such that a subsequent unsolicited communication sent from the remote device to the program via the network address translator is forwarded to the program utilizing the unique address mapping.

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51. (Previously Presented) The method of claim 50 further comprising:

creating an additional hole-punching message for each of a plurality of additional programs, each of the additional hole-punching messages being addressed to the remote device;

configuring each of the additional hole-punching messages to enable the network address translator to create an additional unique address mapping for each of the plurality of additional programs; and

sending each of the additional hole-punching messages;

wherein each of the additional hole-punching messages are received and processed by the network address translator such that the additional unique address mappings are created for each of the plurality of additional programs, such that a subsequent unique unsolicited communication sent from the remote device to each of the plurality of additional programs via the network address translator is forwarded to each of the plurality of additional programs utilizing each of the additional unique address mappings.

52. (Previously Presented) The method of claim 51 wherein the hole-punching message and each of the additional hole-punching messages are formatted so as to be harmless.

53. (Previously Presented) The method of claim 51 further wherein the network address translator is a plurality of network address translators coupled in series.

54. (Previously Presented) The method of claim 51 wherein the remote device is behind an additional network address translator.

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55. (Previously Presented) The method of claim 51 wherein the method is embodied in computer-executable instructions stored on computer-readable media.

56. (Previously Presented) The method of claim 50 wherein the method is embodied in computer-executable instructions stored on computer-readable media.

57. (Previously Presented) The method of claim 50 wherein the unique address mapping includes a public address of the remote device.

58. (Previously Presented) The method of claim 50 wherein the unique address mapping includes a private address of the local device.

59. (Previously Presented) The method of claim 50 wherein the unique address mapping is operative for communications formatted using Transmission Control Protocol.

60. (Previously Presented) The method of claim 50 wherein the unique address mapping is operative for communications formatted using User Datagram Protocol.

61. (Previously Presented) The method of claim 50 wherein the unique address mapping is stored on the network address translator.

62. (Previously Presented) The method of claim 50 wherein the local device is coupled to the network address translator via a private network.

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63. (Previously Presented) The method of claim 50 wherein the network address translator is coupled to the remote device via the Internet.

64. (Previously Presented) The method of claim 50 wherein whatever happens with the hole-punching message subsequent to the creation of the unique address mapping is immaterial.

65. (Previously Presented) The method of claim 50 wherein the hole-punching message is formatted to include a NULL content field.

66. (Previously Presented) The method of claim 65 wherein the hole-punching message is formatted using Transmission Control Protocol or User Datagram Protocol.

67. (Previously Presented) A local device comprising:
a program for communicating with a remote device;
a network communication means for receiving and replying to an unsolicited communication from the remote device, the program being coupled to the remote device via a network address translator;
a message creation means coupled to the network communication means and configured to create a hole-punching message addressed to the remote device, the hole-punching message sent by the communication means and received and processed by the network address translator such that a unique address mapping is created, such that the remote device can initiate the unsolicited communication with the program via the network address translator; and

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wherein any further disposition of the hole-punching method after the unique address mapping is created is immaterial.

68. (Previously Presented) The local device of claim 67 wherein the unsolicited communication is formatted using Transmission Control Protocol or User Datagram Protocol.

69. (Currently Amended) The local device of claim 68 embodied as computer-executable instructions on a computer-readable medium.

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